

# Innovation and development in agricultural and food systems

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## Chapter 11

# Advice to farms to facilitate innovation: between supervision and support

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**Summary.** Agricultural advisory services are important to improve farm performances and the farmers' ability to innovate. However, their effectiveness is regularly called into question. In this chapter, we discuss the evolution of agricultural advisory services and show how the mechanisms and methods used to provide advice have changed over time. There exist several different approaches to providing advice, based on different principles, which include decision support, problem resolution, capacity building for farmer empowerment, and support for individual or collective projects. The choice of an approach depends not only on the nature of the problem to be addressed and the solutions to be implemented, but also on the capacities of the advisers, the objectives set by advisory organizations, and the mechanisms for the governance and funding of agricultural advisory services.

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Agricultural advisory services are perceived by agricultural development actors as an important contributor to the improvement of farm performances. Nevertheless, they are regularly called into question regarding their ability not only to meet the diverse – and sometimes contradictory – expectations of producers and of the other actors of agricultural sectors and territories, but also to facilitate innovation.

Agricultural advice comes in many forms as regards its content, the manner of providing it, and the nature of the organizations that provide it. As a result, there exist multiple definitions of agricultural advice (Faure *et al.*, 2012). In the meaning we give to it, agricultural advice encompasses, on the one hand, the actors involved, the advisory activity, the physical resources used, the rules defined to achieve the objectives that the actors have set themselves, and, on the other hand, the knowledge, know-how and methods used by the advisory actors, in particular by the advisers, to create knowledge useful for action, in individual or collective learning situations. The farmer can access different types of advice, defined by its content (technical, economic, social, environmental, etc.) or by the way it is provided (dissemination of information and techniques, reinforcement of learning, support of initiatives, facilitation of interactions between actors, etc.). Given this very inclusive definition of the term 'advice', it can be provided in many different ways, the most emblematic ways being (i) the dissemination of generic and normative messages originating from the knowledge produced by the research community, (ii) the co-construction by the recipient and the provider of the advice to address a specific problem, and (iii) the accompaniment and support of farmers to help them formulate and carry out their projects.

In this chapter, we will discuss the evolution of agricultural advisory services to show how the mechanisms and methods to provide advice have evolved over time. We will then analyse how advice enables and facilitates innovation at the farm level. We will show that this support relies on different advisory approaches that are based

on different principles, but which often have to be combined. We will then analyse two examples of advisory mechanisms to draw lessons on how to provide support for innovation.

## **45. Evolution of agricultural advice over time**

The history of agricultural advisory services has been marked by several developments. Around the world, massive public investments in agricultural advisory services were made after the Second World War in order to modernize agriculture and promote agricultural innovations. This approach started being called into question beginning in the 1990s, especially in the countries of the Global South, in the context of structural adjustment policies that were leading to the withdrawal of States from a service that was often considered expensive and ineffective. With funding originating from new orientations in development aid and from the private sector, new actors, such as producer organizations, non-governmental organizations, and upstream and downstream companies, have emerged in the world of agricultural advisory services. However, the process has not been of a uniform nature or experienced the same intensity across the world, leading to very varied country- or region-specific advisory landscapes: still diversified in Europe, heavily marked by the presence of private operators in Latin America, weakened and still undergoing reconfiguration in Africa. The orientation of agricultural advisory services, and therefore of the innovation processes that they support, depends largely on the major actors providing the advice. Agricultural advice can be oriented by producers on the basis of their needs and demands. It can also be driven by the market and by the requirements of companies located upstream or downstream of farms, or defined by public actors to ensure a minimal level of agricultural training for farmers or to take collective interests into account.

The advisory approaches therefore have had to adapt to the changing context. During the period of strong State interventionism, the advisory services were instrumental in increasing production by favouring, in a top-down logic, the transfer of knowledge and techniques to the farmers. Innovation was then seen as originating with public or private research entities, and agricultural advisory services were the means to disseminate technical messages from scientific research and the development apparatus. The intervention model known as the ‘training and visit’ system, promoted by the World Bank until the 2000s, was emblematic of such a vision. Given the limitations of these approaches (lack of effectiveness in areas with low agricultural potential; difficulty in addressing complex problems, such as natural resource management or farm management; negative effects in some areas following the excessive use of chemical inputs), new approaches to agricultural advisory services were tried out. They focused on participatory methods in order to better take the farmer’s needs and his room for manoeuvre into account. Farmers then began to be seen as actors of innovation. These methods have been widely deployed since the 1980s, and include, for example, ‘farming systems’ approaches (Chambers *et al.*, 1989) and research and development approaches (Jouve and Mercoiret, 1987), focusing on understanding farmer rationales and on adapting technologies to local conditions. In the 1990s, in the countries of the Global South, methods for ‘participatory technology development’ and ‘participatory learning and action research’ highlighted the process of learning and of using and taking advantage of the farmers’ knowledge (Röling and Jong, 1998). The ‘farm-school’ approach, still promoted by the Food and Agriculture Organization of the United Nations, is also

emblematic of such a vision. These approaches can be clubbed with older experiments, conducted in particular in France within the framework of Ceta (Agricultural Technology Experimentation Centres), which brought farmers together so that they could share their experiences regarding production and farm management with the help of advisers. During the same period of the 1990s, support was also provided to experimenter-farmer networks in Latin America (Hocdé and Miranda, 2000), which took advantage of the farmers' knowledge and its mode of dissemination from farmer to farmer (*de campesino a campesino*).

Some experiments in providing agricultural advice, carried out by non-governmental organizations or by some research entities, stress the need for approaches that provide comprehensive farm-level advice incorporating the technical and economic dimensions. These experiments are based on an individual and collective learning approach. In France, Rural Economy Centres, Chambers of Agriculture and associations such as AFOCG (Farmers' Association for Management and Accounting) also use these comprehensive approaches at the farm level to strengthen farmers' management capacities. In Africa, the first experiments, called 'management advice' or 'management advice for family farms', date back to the 1990s. They use decision support tools, some of which can be used by illiterate farmers since they require no reading or writing (Faure and Kleene, 2004; Dorward *et al.*, 2007). By relying on action-training approaches cognizant of the reality of farms and by encouraging individual reflection and exchanges between producers, these experiments make it possible to strengthen the decision-making capacities of farmers, and thus their autonomy. In this sense, they strengthen the farmers' capacities to innovate.

The increasing diversity of methods now available to go beyond the simple transfer of knowledge and techniques is the result of changes in thinking regarding the provision of agricultural advice and the objectives for providing support to rural actors. These objectives now aim at promoting the dynamics of innovation, reinforcing learning processes, building up capacities for action and adaptation and, ultimately, increasing the producers' autonomy.

## **46. The role of agricultural advisory services in supporting innovation on farms**

### **46.1. Characteristics of innovation at the farm scale**

At this stage of our reflection, it is necessary to characterize innovation at the micro-economic scale of the farm. Schumpeter (1934) placed the entrepreneur at the centre of the innovation process. This process is defined as a new combination of factors of production, which manifest in the creation of a new product, in a new way of producing, in the construction of new markets, or in access to new resources. This definition shows that innovation has many facets. More generally, innovation encompasses various dimensions: technical, economic, social, or organizational. Indeed, as Leeuwis and Aarts (2011) note, innovation always results from the synergy between several dimensions. These authors believe that an innovation combines the implementation of new techniques and practices (what can be referred to as hardware), new knowledge and modes of thinking (software) and new institutions and organizations (orgware). Innovation can be simple or complex, incremental or radical. In a perspective in which innovation is centred on the individual, innovation is the result of the efforts of the entrepreneur who decides to

change. In this chapter, we will retain such a perspective, even though it partially ignores the entrepreneur's relationships with other actors (suppliers of goods and services, for example) who also structure the innovation process. Other chapters in this book show how innovation arises from interactions between various actors who pool resources and together create actionable knowledge.

Innovations at the farm scale can concern production processes, and many actors first think about his domain when they want to promote innovation in agriculture. In such cases, innovation may concern a part of the production system, by introducing a new technology (for example, a new crop variety or a new tillage tool). Innovation of this type is considered incremental since it does not entail a drastic change in the functioning of the farm. Innovation may also involve the entire production system (for example, a transition to conservation agriculture or organic farming, or the introduction of mechanization). It is then radical in nature because the overall functioning of the farm has to be revamped. However, improving access to means of production (land, water, labour, credit, inputs, etc.) or improving the management of post-harvest products (conservation of stocks, processing, marketing) can be more significant in increasing farm productivity and remuneration of family labour than improving production processes. Innovation is thus also needed in these areas.

Innovation may originate from outside the farm. This type of innovation can then be popularized and disseminated by technicians. It can also be endogenous in origin, driven by the farmers themselves. But often, it results from a combination of both, either through work jointly undertaken by farmers and technicians (innovation is then said to be co-constructed), through a deferred implementation over time (an exogenous innovation proposed at a given moment and then rejected by the farmers can be appropriated and transformed by an individual or by a group several years later), or through an implementation in a different location (an endogenous innovation in one area can be disseminated by technicians in another area where it is unknown).

Farmers innovate depending on different parameters. First, in the case of an exogenous innovation, they evaluate its utility using their own yardsticks. Experts have proposed several assessment criteria for evaluating the utility of an innovation. Mendras and Forsé (1983) propose five of them: What are the relative benefits of adopting the innovation compared to the initial situation? How compatible is it with the existing system? How complex is it to implement and use? How easy is it to try out in the context of the farmer willing to innovate? If someone else has adopted it already, can it be easily observed at work? These criteria reflect the farmers' concerns with the degree of complexity of the innovation and the level of risk in adopting it. Second, the farmer's resources (land, water, labour, capital, knowledge, skills, social network) determine his ability to implement the changes necessary to innovate. Studies on farming systems focus on this aspect (Jouve and Mercoiret, 1987). Third, the motivation to change is equally critical. For example, research in Benin (de Romemont, 2014) shows that different farmers who access management advice for family farms may have different profiles in terms of their strategic vision, which includes a vision of their project of change and of the possible paths to implement it. The farmer's profiles – passive, reactive, constrained imaginative, proactive – appeared to be more important than his farm's resources in determining his willingness for change. Fourth, the external environment (physical environment, market conditions, regulations, social norms and values) also plays a key role in his ability to innovate. As a result, innovation cannot be simply thought at the level of

the individual, but must incorporate interactions with other actors. Darré (1996) attaches great importance to exchanges and debates within producer groups (professional dialogue networks) to explain the dynamics of innovation. Nevertheless, interaction with peers to create new norms and validate new ways of doing things is not sufficient; innovation requires interactions with different kinds of actors. For example, the simple introduction of a new maize variety requires taking into account the relationship not only with the seed supplier but also with vendors of fertilizers and pesticides suitable for the new variety. A transition to organic farming requires contractual agreements with certifiers and negotiations with buyers in new value chains. Finally, the adviser, a third party intervening in support of the farmer, can also foster innovation processes.

#### **46.2. Determining a farmer's capacity to innovate**

The theory of adaptive behaviour (Brossier *et al.*, 1997), based on a comprehensive vision of the farm, models the functioning of the farm by taking into account the environment (constraints and advantages), the project of the farmer and his family (more or less clearly defined and coherent), the family situation (characteristics that will encourage the farmer to act or, on the contrary, limit his possibilities of action), and the farm's situation (constraints and advantages). It is the individual farmer's perceptions of his situation and his project that are considered as determining factors in the management of the farm. This theory proposes a model that works by double adaptation, between the evolution of the farmer's situation and that of his project. In this perspective of management, reflection, decision making and action are part of the same process of continuous adaptation. This model is useful for identifying the capacities needed for the farmer and his family to implement their innovative project.

The first capacity conducive to innovation is one that allows the farmer to formulate a strategic vision of the changes to be made. Building on previous research (de Romemont, 2014) from Torset (2005), defines strategic thinking as 'a process of creating meaning, in and for action' that helps the farmer understand his environment. It allows him to develop and revisit the vision of his project and to implement strategic actions related to this vision by adapting these actions over time, consistent with his perception of the environment. The farmer develops a strategic vision with the intention of influencing his environment by creating opportunities for himself in this environment in order to turn his vision into reality. The farmers' strategy development is thus an emerging, non-linear and complex process (de Romemont, 2014).

The second capacity required to innovate is the farmer's ability to carry out a project. It is based on the acquisition and building up of technical and managerial skills (Faure *et al.*, 2012). Technical skills allow him to make the right choices of changes in his activities (cultivation, livestock husbandry, processing of products). Managerial skills make it possible to plan actions, to take tactical decisions (at the level of a single agricultural season) or strategic decisions (at the level of several agricultural seasons), to monitor actions in order to make course corrections and to evaluate the results on the basis of indicators that make sense to him in the specific context of his project.

The third capacity required to innovate is the ability to collaborate. It is based on the acquisition of inter-personal skills in order to widen the social network of the farmer and his family. He is then better placed to obtain access to resources (physical and

cognitive), generate new actionable knowledge, negotiate and enter into business partnerships, coordinate with other actors to undertake collective actions, or engage in advocacy activities and thus influence the organizational and institutional landscape (Leeuwis and van den Ban, 2004 ).

### 46.3. The adviser's role in and advisory approaches for strengthening innovation capacities

A variety of methods and tools can be used to build up a farmer's capacity to innovate. Methods refer here to the procedures for organizing advisory activities (sharing knowledge, providing advice, strengthening learning processes). Tools refer here to technologies used as part of an advisory method. Tools may include 'soft' technologies (indoor meetings, field visits, mobilizing farmers as trainers) and 'hard' technologies (data sheets, information systems, computer models) (Faure *et al.*, 2012). The choice of methods and tools depends on the adviser's objective and reflects his approach. We propose a typology of different advisory approaches: knowledge transfer, decision support, problem solving, capacity building, accompaniment and support, and mediation (Table 11.1). Which approach is used in a particular situation depends, among other factors, on:

- the type of problem that the actors wish to solve (simple *versus* complex) and the type of solution they want to or can implement (standardized *versus* co-constructed);
- the goal of the adviser and his organization as concerns capacity building and empowerment of actors.

Each approach involves a specific type of interaction between the adviser and the farmer(s) (simple *vs* intense, rare *vs* frequent) and may lead to the use of particular advisory tools. The cost of providing advice and the number of farmers (many *vs* few) with access to advisory systems depend in part on these parameters.

Table 11.1. Typology of different advisory approaches.

Objective of the advice	Methodological approach	Key elements of the approach					
		Cases for which the approach is especially relevant	Actors who decide the theme of the advice	Characteristics of the advice	Examples of tools	Cost of advice per farmer	Number of farmers who can be included
Knowledge and technology transfer	The adviser tells the farmer what to do and supervises the farmer	If the problem and the solutions are known If the farmers are ready and able to use the advice	External actors, in general	Standardized, focusing on individuals	ICTs, radio, television, newspapers, training, demonstrations (or a combination )	Relatively low	A very large number

Decision support	The adviser offers options and the farmer decides	If the problem is known and various solutions are possible depending on the situation of each farmer If the farmers are ready and able to use the advice	External actors, in general	Partially adapted to the situation	Computer models, simulation tools	Depends on the decision support tools used	A large number
Problem solving	The adviser co-produces the advice with the farmers	If a problem identified by the actors requires a particular analysis and the solutions are either known, but have to be adapted to the local situation once the diagnosis has been conducted, or have to be invented with the actors	External actors or local actors (depending on the case)	The problem is co-diagnosed and the solutions are co-constructed by the farmers and the advisers	Participatory diagnostic tools such as problem trees and solution trees Planning, monitoring and evaluation tools	High, due to the frequency of interactions between the adviser and farmers	Limited number
Capacity building	The advisor relies on learning processes to help farmers become more autonomous	If it is useful to make farmers more autonomous so that they can solve complex problems they may encounter on a regular basis	External actors (offer of services) and local actors (need for services)	The problem is diagnosed and the solutions are elaborated by the farmers who change their perceptions and their way of acting	Management tools for tactical or strategic decisions, including a strong training dimension	High, because of the training	Limited number
Accompaniment and support to initiatives and projects	The adviser facilitates the construction and implementation of the project	If the actors' project is complex and original, and if new solutions have to be found every time	Local actors	The diagnosis is undertaken jointly and the solution is co-constructed by the farmers (or other rural actor) and the adviser	Self-diagnosis, mental maps, development and action plans	High, because of the accompaniment dimension	Limited number
Mediation between actors and conflict resolution	The adviser plays a role of facilitator and enables interactions between actors	If the problem is complex and the solution depends on getting several groups of actors to come to an agreement		The diagnosis is undertaken jointly and the solutions are co-constructed by the farmers (or other rural actor) and the adviser	Network maps, analysis of relationships between actors, negotiation mechanisms, role plays, modelling	High, because of the large number of interactions between actors	Limited number of farmers (or other rural actors)

Most approaches can be applied either through individualized interactions between the adviser and the farmer, in order to customize the advice to the situation, or



through interactions within farmers' groups, in order to foster exchanges between peers with the aim of strengthening collective learning. However, some approaches used to advise a farmer or a farmer group may be better suited than others to solve problems involving multiple actors of a heterogeneous nature (mediation between actors and conflict resolution, see Chapter 12). Two points deserve highlighting, however. First, the same adviser need not choose the same approach all the time. Thus, an adviser, with the same target audience, can at some point choose a problem-solving approach and another time a capacity-building one, or even a simple knowledge transfer. Thus, the adviser can use a range of approaches to achieve the objectives assigned to him by the farmer or his advisory organization. Second, and limiting the scope of the previous statement, the choice of an approach also depends on the objectives of the advisory organization (Compagnone *et al.*, 2009). Thus, some advisory organizations seek to apply rules on farmers that have been developed by others (a downstream firm that wants to ensure that the farmers' products are of a certain quality, a public service that promotes administrative or environmental standards, etc.). Other organizations can clearly deploy a capacity-building or a support approach (non-governmental organization wishing to implement agroecological practices based on the knowledge of farmers, association supporting the setting up in agriculture of people from outside the world of agriculture, etc.).

## **47. Two case studies of advisory services**

In this section, we discuss two case studies in providing advice. One pertains to building up the capacity of farmers so that they can manage their farms better (Faure and Kleene, 2004) and the other to supporting the project of setting up in part-time agriculture of multi-active persons (Gasselin *et al.*, 2013). We then draw lessons from these cases.

### **47.1. Building up farmers' management capacities: the case of management advice for family farms (MAFF) in Africa**

#### ***47.1.1. Context and objectives of MAFF in Africa***

A variety of actors, such as non-governmental organizations, producer organizations, cotton companies, and ministries of agriculture, have been involved in providing management advice for family farms (MAFF) since the 1990s in several West African countries. MAFF aims to revamp the traditional approaches of agricultural advisory services which are considered too top-down in nature. The aim is to empower the farmers and build up their capacity to innovate so that they can better manage their farms' resources (land, labour, inputs, finances) and their activities, both agricultural (crops and livestock) and non-agricultural. MAFF is also designed to support farm initiatives and projects.

#### ***47.1.2. Principles of intervention, methods and tools of MAFF in Africa***

MAFF is based on the use of participatory methods, allowing farmers to analyse their own practices concerning the different aspects of their farms (production, processing, marketing, etc.), and their technical and economic performances. The principles behind this approach originate from the management sciences and divide the process into several phases: analysis, planning, monitoring, adjustment and evaluation. Analysis and decision support tools are most often based on data recorded by farmers with the help of advisers. The data are sometimes processed on computers by the advisers to refine the analyses. MAFF tools and methods are adapted to the local

context, taking into account the objectives of the main actors involved in the implementation of MAFF, and the human and financial resources available.

MAFF is delivered by advisers, often supported by farmers who play the role of facilitators. To be able to do so, the advisers must gain mastery over the technical contents of the advice (production activities, farm management), modalities of providing advice (participatory methods, learning processes, intermediation with other service providers), and the management of inter-personal relationships (listening, empathy, dialogue). Identifying, training and funding such advisers remains, however, a major challenge in Africa.

#### ***47.1.3. MAFF-stimulated innovations in Africa***

The changes farmers attribute to MAFF pertain to farming practices, management practices of the farm and the family budget, and strategic farm management. Innovations are therefore not only technical, leading to better performance of crops and livestock herds, but also organizational, at the farm level, leading to better management of financial resources and labour. Innovations such as these are often incremental in nature. In some cases, however, MAFF can lead to more radical innovations, involving strategic changes in farm functioning and the emergence of new production systems. Even though MAFF does not explicitly address the collective dimension of innovation, it can often strengthen farmer organizations, since some participants rise to leadership positions within their organizations due to their enhanced capacities.

### **47.2. Supporting the progressive setting up in part-time agriculture: the case of multi-active persons in France**

#### ***47.2.1. Context and objectives of providing advice to multi-active persons in France***

The setting up in agriculture of people from outside the agricultural world is a significant phenomenon in France and raises specific questions. These new farmers, often with multiple jobs and skills, usually leave their territories to embark on agriculture. Due to the uniqueness of their situation and the gradual nature of the process of undertaking agricultural activity, they pose new challenges for the support-providing community. The following issues have to be tackled head-on:

- all the various dimensions of the activity (organization of work, technical and commercial options, taxation, family economics, choice of residence, of territory, of occupation, of consumption, etc.);
- the uniqueness and diversity of their motivations and resources (especially in terms of skills, networks, funding capacities);
- the progressive nature of the implementation of agricultural and non-agricultural activities over several years (constituting a system of activities), which involves taking into account how the person is coping with the new activities, the progress of his project and his relationship with the adviser.

The challenge of providing support is to clearly define household's farming project, first with the project's initiator himself, then with the various actors with whom he is in contact. The approach is based on a redesigned accompaniment framework (approaches of accompaniers, main principles, temporality, evaluation, etc.), which needs to be legitimized by the actors of the territorial support services system.

#### ***47.2.2. Principles of and tools for the accompaniment of multi-active persons in France***

The approach allows the farmer to clarify and strengthen his motivations. The support (or accompaniment) is therefore primarily a relationship mechanism allowing the accompanier and the project's initiator to work together to co-build the project. This accompaniment consists of iterations between intentions, changes and the expected goal during a reflexive evaluation. In this sense, accompaniment is neither advice, nor expertise, nor training, nor diagnosis, but a process that harmonizes a set of diverse practices adapted to each phase of the project (Paul, 2002). The ethical framework that the accompanier must respect guarantees the process; it includes confidentiality, an inter-personal relationship, the preservation of the 'enigma of the other', a voluntary commitment, but also flexible mechanisms in order to adapt to particular situations.

In southern France, this accompaniment approach, co-built by researchers and associations supporting the setting up in agriculture of persons from outside the world of agriculture (Association for the development of agricultural and rural employment of Languedoc-Roussillon, Airdie<sup>31</sup>), relies on three reflexive tools, whose flexibility is guaranteed because of the possibility of instrumentation that is inherent to them (Dalmais *et al.*, 2015). The first tool helps determine the motivations and skills of the person, the second the project's territorial anchoring, and the third the sustainability of the system of activities which is planned by the initiator. In a situation of uncertainty, these tools are designed to build up the capacity of action of the individual being supported.

#### ***47.2.3. Innovations facilitated by the accompaniment of multi-active persons in France***

Accompaniment helps identify and support initiators of innovative projects in their relationships with the market, work and the territory (Tallon *et al.*, 2013). The new relationship with the market appears in particular in the forms of production for self-consumption and non-market exchanges which form the basis of certain projects. The new relationship with work is often expressed in the meaning and motivations assigned to the professional project, the paradoxical link to salaried work, the mastery of the calendar of activities (seasonality, etc.), the access to different forms of financing, as well as in the management of contingencies and uncertainties. The new relationship to the territory is visible in new ways of living and of managing the landscape, in the mobilization of territorial resources and in the reliance on specific networks.

### **47.3. Lessons from these two cases**

Management advice for family farms focuses, as its name explicitly states, on farm management. The issues to be addressed are defined through dialogue between the farmer and the adviser as also, in part, by the advisory organization. There is a deliberate focus on the creation of learning situations so that the farmer's managerial capacities can be built up and he becomes more autonomous. To this end, the adviser alternates moments of training and moments of interaction to encourage reflexive processes. The method is standardized in order to orient advisers and therefore can

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<sup>31</sup> Association member of the France Active national network, defining itself as a *solidarity financier for employment in Languedoc-Roussillon* ([airdie.org/airdie](http://airdie.org/airdie)).

be used with a variety of adviser profiles, thus facilitating the dissemination of the approach to a wider audience. The tools are aids for reflection and decision making. They structure thinking and reasoning by helping the farmer take management decisions; there is no standardized technical or managerial solution but an adaptation to each farmer's situation. The innovations facilitated by MAFF are generally incremental in nature and pertain to farming techniques and the management of farm resources. However, the technical and economic performances of the farm can be greatly improved as the farmer gradually builds up his managerial capacities thanks to MAFF (de Romemont, 2014). The most proactive farmers can embrace more radical innovations. The collective dimension is however absent from MAFF, which can engender tensions between actors or make it impossible to address problems at the scale of the territory.

Accompaniment of the creation of agricultural activity always focuses on both the project (feasibility, necessary resources, objectives, etc.) and the person (sense of the activity for the initiator, skills, representations, etc.). It therefore has a broad aim because the objectives to be attained have to be defined along the way, depending on the progressive maturity of a life and activity project, and on the evolution of the capacity to act of the concerned individual or household. The adviser, renamed 'accompagnier', must possess capacities of listening and reformulation. He must demonstrate empathy and distancing. These skills require training that conventional agricultural education rarely offers, but which can be acquired through certain professional training conducted by associations. The tools available encourage reflection and help to make regular diagnoses, before and during the action. Some are intended to serve as a unifying thread all through the support. Innovations are often incremental, affecting the organization of work or the balance among activities, but they can also be radical, helping innovative activity systems emerge. While the collective dimensions of the project are taken into account, in particular by paying attention to networks and the territory, the accompaniment remains mainly oriented towards the individual.

#### **48. Conclusion: the choice of an advisory approach and innovation**

Agricultural advice can be based on different approaches, which are characterized by the extent to which farmers' demands and knowledge are taken into account and the importance accorded to support learning activities and to empower farmers. The choice of an approach depends not only on the nature of the problem to be addressed and the solutions to be implemented, but also on the advisers' capacities, on the objectives set by the advisory organizations, and on the mechanisms of governance and funding of advisory systems. Agricultural advice promotes innovation on the farm or, more broadly, within the activity system, leading to new farming practices, new ways of managing the farm's resources, and new relationships with the outside world. In some cases, innovation can be described as ordinary because it is undertaken by individuals who modify their perception of their farms and their environment and change their practices to achieve an objective they have defined. But innovation can also be radical, when the advice leads to a transformation of the production system or the activity system. Nevertheless, even though agricultural advice is a lever for bringing about change, it does not facilitate all forms of innovation and, in particular, does not facilitate those that require the creation of new relationships between heterogeneous actors within a value chain or territory. Links between the world of agricultural advice and that of support of collectives for

territorial development are yet to be developed.

## Bibliography

- Brossier J., Chia E., Marshall E, Petit M., 1997. *Gestion de l'exploitation agricole familiale. Éléments théoriques et méthodologiques*. Enesad-Cnerta, Dijon, 215 p.
- Chambers R., Pacey A., Thrupp L.A., 1989. *Farmer first. Farmer innovation and agricultural research*. Intermediate Technology Publication, London.
- Compagnone C., Auricoste C., Lemery B. (eds), 2009. *Conseil et développement en agriculture. Quelles nouvelles pratiques ?* Éditions Quæ, Educagri, Versailles, Dijon.
- Dalmais M., Gasselin P., Cerf M., 2015. Concevoir des outils pour l'accompagnement individuel à la création d'activités en agriculture : quelles caractéristiques et fonctions attendues ? *Pour*, 227, 22-30.
- Darré J.-P., 1996. *L'invention des pratiques dans l'agriculture*. Karthala, Paris, 194 p.
- De Romemont A., 2014. Apprentissage et réflexion stratégique des producteurs agricoles : construction de la proactivité dans le conseil à l'exploitation familiale au Bénin, PhD thesis, Montpellier-SupAgro.
- Dorward P., Shepherd D., Galpin M., 2007. The development and role of novel farm management methods for use by small-scale farmers in developing countries. *Journal of Farm Management*, 13, 123-34.
- Faure G., Desjeux Y., Gasselin P., 2012. New challenges in agricultural advisory services from a research perspective: a literature review, synthesis and research agenda. *Journal of Agricultural Education and Extension*, 18(5), 461-492.
- Faure G., Kleene P., 2004. Lessons from new experiences in extension in West Africa: management advice for family farms and farmers' governance. *Journal of Agricultural Education and Extension*, 10, 37-49.
- Gasselin P., Tallon H., Dalmais M., Fiorelli C. (eds), 2013. *Trois outils pour l'accompagnement à la création et au développement d'activités : Trajectoire, Cartapp et Edappa. Application à l'installation en agriculture*. Inra, Cirad, Adear-LR, Montpellier Supagro, Airdie, Région Languedoc-Roussillon, Montpellier, 151 p.
- Hocdé H., Miranda B., 2000. *Los intercambios campesinos : más allá de las fronteras... ! seamos futuristas*. IICA-Cirad-GTZ, San Salvador, 294 p.
- Jouve P., Mercoiret M.-R., 1987. La recherche-développement : une démarche pour mettre les recherches sur les systèmes de production au service du développement rural. *Les Cahiers de Recherche-Développement*, 16, 8-15.
- Leeuwis C., Aarts N., 2011. Rethinking Communication in Innovation Processes: Creating Space for Change in Complex Systems. *Journal of Agricultural Education and Extension*, 17(1), 21-36.
- Leeuwis C., van den Ban A., 2004. *Communication for innovation: rethinking agricultural extension*, Third edition, Blackwell Publishing.
- Mendras H., Forsé M., 1983. *Le changement social*. Armand Colin, Paris.
- Paul M., 2002. L'accompagnement, une nébuleuse. L'accompagnement dans tous ses états. *Éducation Permanente*, 4(153), 43-56.

Röling N., Jong F.D., 1998. Learning: shifting paradigms in education and extension studies. *Journal of Agricultural Education and Extension*, 5, 143-61.

Schumpeter J., 1934. The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle. New Brunswick, New Jersey: Transaction Books. (*Translated from the 1911 original German, Theorie der wirtschaftlichen Entwicklung.*)

Tallon H., Dulcire M., Dubien A., 2013. Penser la pluri-activité dans le Haut-Languedoc : registres de justification et dispositif d'accompagnement. *Revue d'économie régionale et urbaine*, 1, 93-117.

Torset C., 2005. La réflexion stratégique : objet et outil de recherche pour le management stratégique. XIV<sup>e</sup> conférence internationale de management stratégique. Angers, France, 30 p.